

Purified anti- α -Synuclein, aggregated Antibody

Catalog# / Size	865101 / 25 μ g 865102 / 100 μ g
Clone	A17183G
Regulatory Status	RUO
Other Names	Non-A beta component of AD amyloid, NACP, PARK1, Synuclein alpha-140, non-A4 component of amyloid, alpha-synuclein, isoform NACP140, non-amyloid beta component (NAP)
Isotype	Rat IgG1, κ
Description	Alpha-synuclein is expressed principally in the nervous system, but it is also produced in the other tissues, including the skin. In the brain, the protein is primarily neuronal, but it is also present in glia. Neuronal α -synuclein is concentrated in the presynaptic nerve terminals, interacts with plasma membrane phospholipids, and is also present in the nuclei and mitochondria. At least three isoforms of synuclein are produced through alternative splicing. The most common isoform is a 140 amino acid-long transcript. Other isoforms are α -synuclein-126, lacking residues 41-54; and α -synuclein-112, which lacks residues 103-130. Alpha-synuclein's physiological role is poorly understood, but the protein has been implicated in regulating dopamine release and transport, synaptic vesicle clustering, and functioning as a SNARE-complex chaperone. Alpha-synuclein fibrils are a major component of the intracellular Lewy bodies that are associated with Parkinson's disease, Lewy body dementia, and multiple system atrophy.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Aggregated recombinant human α -synuclein.
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	IHC-P - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by formalin-fixed paraffin-embedded immunohistochemical staining. For immunohistochemistry on formalin-fixed paraffin-embedded tissue sections, a concentration of 5.0 μ g/mL for chromogenic staining and 1.0 - 5.0 μ g/mL for fluorescent staining is suggested. It is recommended that the reagent be titrated for optimal performance for each application.
RRID	AB_2810767 (BioLegend Cat. No. 865101) AB_2810768 (BioLegend Cat. No. 865102)

Antigen Details

Structure	Human α -synuclein is a 140 amino acid protein with a molecular mass of 14 kD.
Distribution	Tissue distribution: Primarily nervous system, but lower expression in other tissues such as blood and skin. Cellular distribution: Cytoskeleton, cytosol, lysosome, mitochondria, nucleus, plasma membrane, and extracellular.

Function	α -synuclein plays several roles in synaptic activity such as synaptic vesicle trafficking and neurotransmitter release. It is also involved in the regulation of gene expression.
Interaction	Interacts with various proteins, such as UCHL1, phospholipase D, histones and SNARE components.
Cell Type	Neurons
Biology Area	Cell Biology, Mitochondrial Function, Neurodegeneration, Neuroinflammation, Neuroscience, Protein Misfolding and Aggregation, Protein Trafficking and Clearance, Synaptic Biology
Molecular Family	α -Synuclein, Presynaptic proteins, Synaptic Vesicle Trafficking/Endocytosis
Antigen References	<ol style="list-style-type: none"> 1. Mor DE, et al. 2016. <i>Neurobiol. Dis.</i> 88:66. 2. Jucker M, Walker LC. 2013. <i>Nature.</i> 501(7465):45. 3. Bartels T, et al. 2011. <i>Nature.</i> 477(7362):107. 4. Devine MJ, et al. 2011. <i>Mov. Disord.</i> 26:2160.
Gene ID	6622

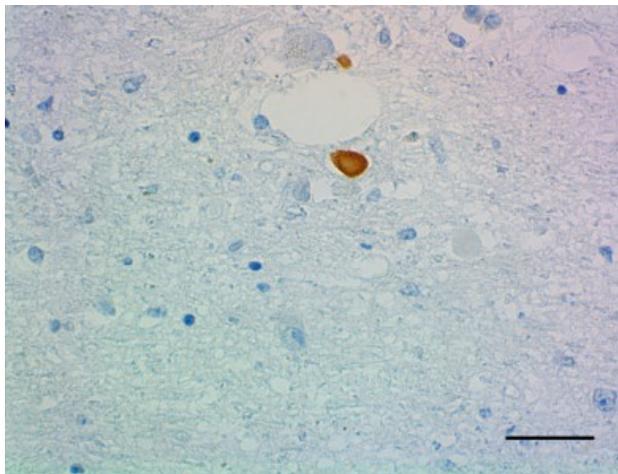
Related Protocols

[Immunohistochemistry Protocol for Paraffin-Embedded Sections](#)

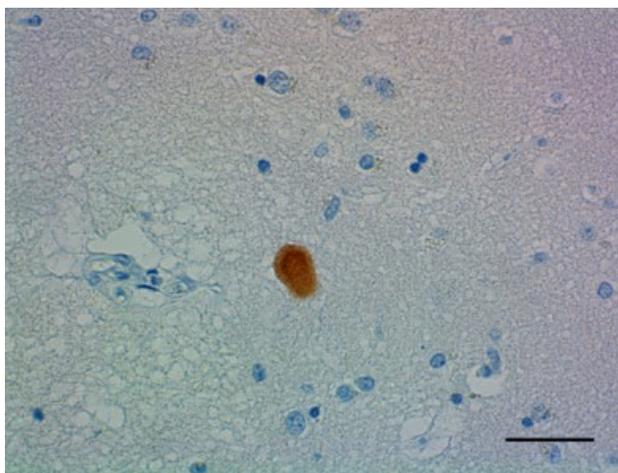
Other Formats

Purified anti- α -Synuclein, aggregated, HRP anti- α -Synuclein, aggregated, Biotin anti- α -Synuclein, aggregated

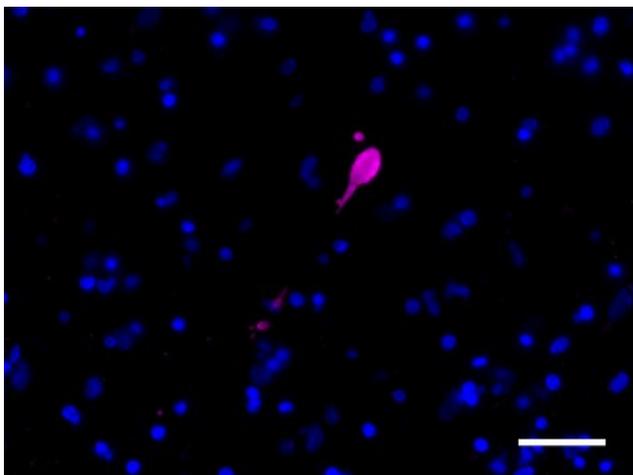
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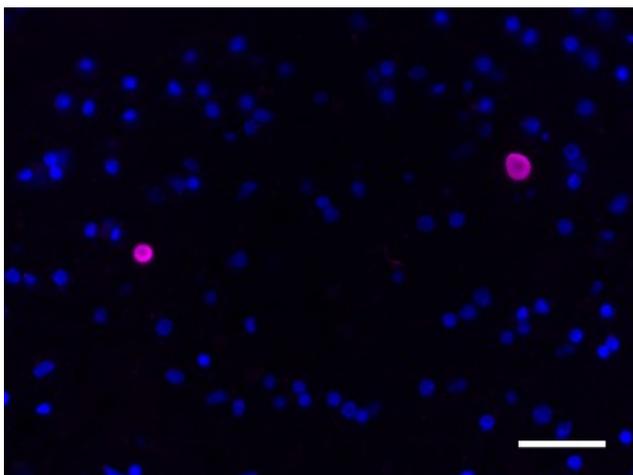
IHC staining of purified anti- α -Synuclein, aggregated antibody (clone A17183G) on formalin-fixed paraffin-embedded Parkinson's disease brain tissue. Following antigen retrieval using Sodium Citrate H.I.E.R. the tissue was incubated with 5 μ g/mL of the primary antibody overnight at 4°C. BioLegend's Ultra Streptavidin (USA) HRP Detection Kit (Cat. No. 929901) was used for detection followed by hematoxylin counterstaining, according to the protocol provided. The image was captured with a 40X objective. Scale bar: 50 μ m



IHC staining of purified anti- α -Synuclein, aggregated antibody (clone A17183G) on formalin-fixed paraffin-embedded Parkinson's disease brain tissue. Following antigen retrieval using Sodium Citrate H.I.E.R. the tissue was incubated with 5 μ g/mL of the primary antibody overnight at 4°C. BioLegend's Ultra Streptavidin (USA) HRP Detection Kit (Cat. No. 929901) was used for detection followed by hematoxylin counterstaining, according to the protocol provided. The image was captured with a 40X objective. Scale bar: 50 μ m



IHC staining of purified anti- α -Synuclein, aggregated antibody (clone A17183G) on formalin-fixed paraffin-embedded Parkinson's disease brain tissue. Following antigen retrieval using Sodium Citrate H.I.E.R., the tissue was incubated with 1 μ g/mL of the primary antibody overnight at 4°C, followed by incubation with Alexa Fluor® 647 goat anti-rat IgG (Cat. No. 405416) for one hour at room temperature. Nuclei were counterstained with DAPI. The image was captured with a 40X objective. Scale bar: 50 μ m



IHC staining of purified anti- α -Synuclein, aggregated antibody (clone A17183G) on formalin-fixed paraffin-embedded Parkinson's disease brain tissue. Following antigen retrieval using Sodium Citrate H.I.E.R., the tissue was incubated with 5 μ g/mL of the primary antibody overnight at 4°C, followed by incubation with Alexa Fluor® 647 goat anti-rat IgG (Cat. No. 405416) for one hour at room temperature. Nuclei were counterstained with DAPI. The image was captured with a 40X objective. Scale bar: 50 μ m

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